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EXAMINER

ZHENG, LOIS L

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/743,387	Applicant(s) MATSUKAWA ET AL.	
	Examiner LOIS ZHENG	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-31, 34-36, 39 and 44-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-31, 34-36, 39 and 44-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/3/09, 2/17/10, 2/26/10</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Claims 29 and 45-46 are amended in view of applicant's response filed 5 November 2009. Claims 1-28, 32-33, 37-38 and 40-43 are canceled. Therefore, claims 29-31, 34-36, 39 and 44-48 are currently under examination.

Status of Previous Rejections

2. The rejection of claims 29, 31-43 and 47-48 under 35 U.S.C. 103(a) as being unpatentable over JP 02-240295(JP'295) in view of JP 59-064781(JP'781) is withdrawn in view of applicant's persuasive argument regarding JP'781's specific teaching of applying the coating solution without washing filed 5 November 2009.

As a result, the rejection of claim 30 under 35 U.S.C. 103(a) as being unpatentable over JP'295 in view of JP'781, and further in view of Shimakura et al. US 2001/0037748 A1(Shimakura) and the rejection of claims 44-46 under 35 U.S.C. 103(a) as being unpatentable over JP'295 in view of JP'781, and further in view of Nagashima et al. US 6,180,177 B1 (Nagashima) are also withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 29-31, 34-36, 39 and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'295 in view of Shimakura, and further in view of Nagashima.

JP'295 teaches a process for coating an automobile part by electrodeposition wherein the automobile part is pretreated in with a corrosion inhibiting coating, and without drying, directed treated with an electrodeposition coating. JP'295 further teaches that the automobile part is a steel sheet(translation: page 3 lines 8-19).

However, JP'295 does not explicitly teach that corrosion inhibiting coating comprises the chemical conversion coating composition as claimed with claimed pH.

Shimakura teaches a process for treating a metal surface with a conversion coating solution comprising a silane coupling agent in an amount of 0.5-100g/l, a fluoride compound of Zr/Ti in an amount of 0.01-50g/l, and persulfates(abstract, paragraphs [0021, 0024]). Shimakura further teaches that suitable silane coupling agent includes γ -aminopropyltrimethoxy silane, N- β -(aminoethyl) γ -aminopropyltrimethoxy silane(paragraph [0014]).

Nagashima teaches an aminosilane coupling agent and Zr/Ti fluoride containing conversion coating solution having a pH ranging from 2.0 to 6.5(col. 7 lines 27-44).

Regarding claims 29-31, 34-36, 39 and 47-48, it would have been obvious to one of ordinary skill in the art to have incorporated the conversion coating solution of Shimakura into the pretreatment step of JP'295 in order to achieve high corrosion resistance and processability as taught by Shimakura(paragraph [0004]). It would also have been obvious to one of ordinary skill in the art to have incorporated a pH of 2.0-6.5 as taught by Nagashima into the conversion coating solution of JP'295 in view of Shimakura in order to ensure formation of high corrosion resistant coating film without

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precipitate or deposition of water soluble polymer as taught by Nagashima(col. 7 lines 35-44).

In addition, the concentration ranges of the silane coupling agent and the Zr/Ti compound as taught by JP'295 in view of Shimakura and Nagashima overlap the claimed silane coupling agent and Zr/Ti compound concentration ranges. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed silane coupling agent and Zr/Ti compound concentration ranges from the disclosed ranges of JP'295 in view of Shimakura and Nagashima would have been obvious to one skilled in the art since JP'295 in view of Shimakura and Nagashima teach the same utilities in their disclosed silane coupling agent and Zr/Ti compound concentration ranges.

Furthermore, since the JP'295 in view of Shimakura and Nagashima teach the same conversion coating step utilizing substantially the same coating solution as claimed, the examiner concludes that the conversion coating formed by the process of JP'295 in view of Shimakura and Nagashima is formed via deposition of hydroxide or oxide of Zr/Ti as claimed.

Furthermore, even though JP'295 in view of Shimakura and Nagashima do not explicitly teach the claimed washing of the conversion coated metal base material with ion exchange water prior to electrodeposition, one of ordinary skill in the art would have found it obvious to have washed the conversion coated surface of JP'295 in view of Shimakura and Nagashima with water such as the claimed ion exchange water, in order to remove excess coating material without introducing impurities.

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Regarding claims 44-46, Nagashima further teaches that its aminosilane coupling agent and Zr/Ti fluoride containing conversion coating solution also comprises metal ions such as Zn, Mg and Al(abstract). Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated metal ions such as Zn, Mg and Al as taught by Nagashima into the conversion coating solution of JP'295 in view of Shimakura in order to further improve corrosion resistance as taught by Nagashima(col. 4 lines 51-61).

5. Claims 29, 31, 34-36, 39 and 44-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'295 in view of Nagashima et al. US 6,180,177 B1 (Nagashima).

JP'295 teaches a process for coating an automobile part by electrodeposition wherein the automobile part is pretreated in with a corrosion inhibiting coating, and without drying, directed treated with an electrodeposition coating. JP'295 further teaches that the automobile part is a steel sheet(translation: page 3 lines 8-19).

However, JP'295 does not explicitly teach that corrosion inhibiting coating comprises the chemical conversion coating composition as claimed.

Nagashima teaches a process for treating a metal surface with a conversion coating solution comprising a silane coupling agent, a fluoride compound of Zr/Ti, and metal ions such as Zr, Mg and Al(col. 4 lines 42-61, col. 5 lines 5-10 and 5-39).

Nagashima further teaches that suitable silane coupling agent includes N-(aminoethyl) 3-aminopropyltrimethoxy silane (col. 5 lines 37-38). The pH of the conversion coating solution as taught by Nagashima is in a range of 2.0-6.5(col. 7 lines 37-44).

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Regarding claims 29, 31, 34, 44-48, it would have been obvious to one of ordinary skill in the art to have incorporated the conversion coating solution of Nagashima into the pretreatment step of JP'295 in order to achieve high corrosion resistance and adhesion as taught by Nagashima(col. 2 lines 21-31).

In addition, since the JP'295 in view of Nagashima teach the same conversion coating step utilizing substantially the same coating solution as claimed, the examiner concludes that the conversion coating formed by the process of JP'295 in view of Nagashima is formed via deposition of hydroxide or oxide of Zr/Ti as claimed.

Furthermore, even though JP'295 in view of Nagashima do not explicitly teach the claimed washing of the conversion coated metal base material with ion exchange water prior to electrodeposition, one of ordinary skill in the art would have found it obvious to have washed the conversion coated surface of JP'295 in view of Nagashima with water such as the claimed ion exchange water, in order to remove excess coating material without introducing impurities.

Regarding claims 35-36 and 39, Nagashima further teaches that the concentration of the Zr/Ti compound is 0.1-15wt%, which overlaps the claimed Zr/Ti compound concentration range. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed Zr/Ti compound concentration range from the disclosed ranges of JP'295 in view of Nagashima would have been obvious to one skilled in the art since JP'295 in view of Nagashima teach the same utilities in their disclosed Zr/Ti compound concentration range.

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6. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP'295 in view of Nagashima, and further in view of Shimakura.

The teachings of JP'295 in view of Nagashima are discussed in section 5 above. However, JP'295 in view of Nagashima do not explicitly teach the claimed accelerator in the conversion coating solution.

Shimakura teaches an aminosilane coupling agent and Zr/Ti fluoride containing conversion coating solution that further comprises persulfates since persulfates contributes to corrosion resistance(paragraphs [0021, 0024]).

Regarding claim 30, it would have been obvious to one of ordinary skill in the art to have incorporated persulfates as taught by Shimakura into the conversion coating solution of JP'295 in view of Nagashima in order to further improve corrosion resistance as taught by Shimakura.

7. Claims 32-33, 37-38 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'295 in view of Nagashima, and further in view of JP 59-064781 (JP'781).

The teachings of JP'295 in view of Nagashima are discussed in section 5 above. However, JP'295 in view of Nagashima do not explicitly teach the claimed aminosilane coupling agent concentration.

JP'781 teaches an aminosilane coupling agent and Zr/Ti fluoride containing conversion coating solution, wherein the aminosilane coupling agent is present in an amount of 0.5-100g/l(translation: page 6 lines 10-13).

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Regarding claims 32-33, it would have been obvious to one of ordinary skill in the art to have incorporated 0.5-100g/l of aminosilane coupling agent as taught by JP'781 into the conversion coating solution of JP'295 in view of Nagashima since JP'781 teaches such a concentration range is best utilizes the effect of the silane coupling agent as taught by JP'781(translation: page 6 lines 10-13).

Regarding claims 37-38 and 41-42, the instant claims are rejected for the same reasons set forth in the rejection of claims 31 and 36 above.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 29, 32-43 and 47-48 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 7,250,193 B2 (US'193) in view of JP'295.

Claims 1-8 of US'193 teach a metal surface treatment process that is significantly similar to the claimed cation electrodeposition process, including the claimed conversion coating with an aminosilane and Zr/Ti/Hf compound containing solution, followed by rinsing and subsequent cation electrodeposition.

Although claims of US'193 do not explicit require that the electrodeposition takes place after the rinsing step without drying, the claims of US'193 also do not explicitly recite such drying step.

JP'295 teaches a process for coating an automobile part by electrodeposition wherein the automobile part is pretreated in with a corrosion inhibiting coating, and without drying, directed treated with an electrodeposition coating(translation: page 3 lines 8-19).

Therefore, one of ordinary skill in the art would have found it obvious to have performed cationic electrodeposition step in the process of US'193 without drying of the conversion coating formed from the pretreatment step with expected success in light of the teachings of JP'295.

Response to Arguments

10. The declaration under 37 CFR 1.132 filed 5 November 2009 is insufficient to overcome the rejection of claims 29, 31, 34-36, 39 and 47-48 based upon JP'295 in view of JP'781 as set forth in the last Office action because:

Applicant's experiment according to the instant invention uses a pH of 4.2 while instant independent claim 29 recites a pH range of 1.5-6.5. Applicant's experiment has not provided sufficient factual data, both within and outside of the claimed pH range, to

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establish the criticality of the claimed pH range. Therefore, applicant's experiment is not commensurate with the scope of instant invention.

However, applicant's declaration is moot due to the withdrawn of rejections based on JP'295 in view of JP'781 set forth above.

11. Applicant's arguments filed 5 November 2009 have been considered but they are not persuasive.

In the remarks, applicant argues that JP'295 does not teach that its pretreatment step is a chemical conversion coating step using the claimed Zr/Ti based composition.

The examiner acknowledges JP'295's lack of teaching of specific types of pretreatment composition. However, as also admitted by the applicant, JP'295 does teach that the pretreatment step is applied with the purpose of imparting corrosion resistance and to improve adhesion. Therefore, one of ordinary skill in the art would have found it obvious to incorporate any metal surface treatment process capable of impacting corrosion resistance and improving adhesion into the pretreatment step of JP'295 with expected success. Both Shimakura and Nagashima teach such processes.

Applicant further argues that Shimakura teaches drying after the coating process which differs from the present invention.

The examiner does not find applicant's argument persuasive because Shimakura teaches that the drying procedure can take place at room temperature for as little as 2 seconds(paragraph [0030]), which implies that sufficient coating layer would have formed during the coating process and/or immediately after the metal substrate is removed from the treatment solution. The drying time of at little as 2 seconds as taught

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by Shimakura also falls well within the range of time it would take for the treated metal substrate to be transferred for further processing. Therefore, the examiner concludes that the surface treatment process as taught by Shimakura is capable of forming a corrosion resistant coating layer without a subsequent drying step as claimed.

In addition, the primary reference JP'295 already teaches that the subsequent cationic electrodeposition step is applied without drying the coating formed from the pretreatment step.

Furthermore, as admitted by the applicant(see page 8, third and fourth full paragraphs), it is well known in the metal surface treatment art that the cationic electrodeposition is a wet process. Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated the metal surface treatment step of Shimakura into the pretreatment step of JP'295 without the drying step since the coating process would have gone from a wet pretreatment step to another wet cation electrodeposition step, and extra drying step would have seemed unnecessary and counter intuitive to one of ordinary skill in the art.

Applicant further argues that Shimakura does not disclose using a steel plate as the metal substrate.

The examiner does not find applicant's argument convincing because it is not commensurate with the scope of the instant claims. Independent claims 29 recites a metal base material "comprises at least iron based material", which includes the Zn/Al coated steel surfaces of Shimakura. Instant claim 48 recites a metal base material

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"comprises a plurality of metal substrates selected from iron material, aluminum material and zinc material", which also includes the Zn/Al coated steel surfaces of Shimakura.

Applicant further argues that Shimakura does not teach the claimed subsequent cationic electrodeposition step.

The examiner does not find applicant's argument convincing because the primary reference JP'295 already teach the claimed subsequent cationic electrodeposition step. Since JP'295 does not limit the types of pretreatment as long as the pretreatment step provides rust proofing or improves adhesion(page 3 of the translation, second paragraph from the bottom), and the coating process of Shimakura provides imparts high corrosion resistance to the treated surface which meets the requirement of JP'295's pretreatment step. Therefore, one of ordinary skill in the art would have found it obvious to have incorporated the coating step of Shimakura into the pretreatment step of JP'295 with expected success.

Applicant further argues that Nagashima also teaches drying after the coating process which differs from the present invention, and Nagashima does not teach subsequent cationic electrodeposition step.

The examiner does not find applicant's argument convincing because the coating solution as taught by Nagashima is substantially the same as claimed conversion coating solution comprising the same amino-group containing silane coupling agent, the same fluoride compound of Zr/Ti and the same metal ions such as Zr, Mg and Al. In addition, the coating solution of Nagashima has the same pH as claimed conversion coating solution and Nagashima also teaches that its coating solution produces coating

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with high corrosion resistance and adhesion. (see paragraph 5 above). Therefore, one of ordinary skill in the art would have found the same coating formation prior to the drying step of Nagashima as claimed. In addition, it would have been obvious to one of ordinary skill in the art to have incorporated coating step of Nagashima into the pretreatment step of JP'295 with expected success since Nagashima's coating step satisfies the requirement of JP'295's pretreatment step, which is to impact corrosion resistance and to improve subsequent paint adhesion.

In addition, the subsequent cationic electrodeposition step has been taught by the primary reference JP'295.

Furthermore, as admitted by the applicant(see page 8, third and fourth full paragraphs), it is well known in the metal surface treatment art that the cationic electrodeposition is a wet process. Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated the metal surface treatment step of Nagashima into the pretreatment step of JP'295 without the drying step since the coating process would have gone from a wet pretreatment step to another wet cation electrodeposition step, and extra drying step would have seemed unnecessary and counter intuitive to one of ordinary skill in the art.

Applicant further argues that Nagashima teaches using a steel plate as the metal substrate.

The examiner does not find applicant's argument convincing because it is not commensurate with the scope of the instant claims. Independent claims 29 recites a metal base material "comprises at least iron based material", which includes the steel

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surface as well as other metal surfaces such as Zn plated steel and Al alloys of Nagashima. Instant claim 48 recites a metal base material "comprises a plurality of metal substrates selected from iron material, aluminum material and zinc material", which also includes steel, Zn plated steel and Al alloy surfaces of Nagashima.

Applicant further argues that Nagashima's coating solution requires phenol resin as an essential component and it is used as a film forming material, which is different from the zirconium oxide coating of the instant invention.

The examiner does not find applicant's argument convincing because the instant dependent claim 29 uses open-ended transitional phrase "comprises" when describing the conversion coating agent, which implies that the claimed conversion coating agent may contain significant amounts of other additional coating components that have not been explicitly recited in the claim. Therefore, the coating solution as claimed does not exclude the phenol resin in the coating solution of Nagashima. In addition, the coating solution of Nagashima comprises significant amount of Zr/Ti which would have resulted in a Zr/Ti oxide containing coating film as claimed.

Applicant further argues that Nagashima's reason for adjusting pH is different from the instant invention.

The examiner does not find applicant's argument convincing because it is not commensurate with the scope of the instant invention. The instant independent claim 29 recites "said chemical conversion coating agent has a pH of 1.5 to 6.5"(i.e. a product type limitation", not "adjusting pH to promote etching"(i.e. a process type limitation".

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Since the conversion coating solution of Nagashima has a pH of 2.0-6.5, it meets the limitation of claimed pH.

Regarding the double patenting rejection, applicant further argues that claims of US Patent No. 7,250,193 recites water-borne and/or water-soluble resin and does not explicitly claim coating without drying.

The examiner does not find applicant's argument convincing because applicant is attacking US Patent No. 7,250,193 alone while the double patent rejection is based on the claims of US Patent No. 7,250,193 and in view of JP'295. The applicant is reminded that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., Inc., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). See MPEP 2145 (IV).

In addition, the instant dependent claim 29 uses open-ended transitional phrase "comprises" when describing the conversion coating agent, which implies that the claimed conversion coating agent may contain significant amounts of other additional coating components that have not been explicitly recited in the claim. Therefore, the coating solution as claimed does not exclude the water-borne and/or water-soluble resin in the coating solution of US Patent No. 7,250,193.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LOIS ZHENG whose telephone number is (571)272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art
Unit 1793

LLZ